

upon the Paper made an Angle with the Paper, equal to that Angle which was made with the same Paper by the Light reflected from it to the Eye. Beyond the Prism was the Wall of the Chamber under the Window covered over with black Cloth, and the Cloth was involved in Darkness that no Light might be reflected from thence, which in passing by the edges of the Paper to the Eye, might mingle it self with the Light of the Paper and obscure the Phenomenon thereof. These things being thus ordered, I found that if the refracting Angle of the Prism be turned upwards, so that the Paper may seem to be lifted upwards by the Refraction, its blew half will be lifted higher by the Refraction than its red half. But if the refracting Angle of the Prism be turned downward, so that the Paper may seem to be carried lower by the Refraction, its blew half will be carried something lower thereby than its red half. Wherefore in both cases the Light which comes from the blew half of the Paper through the Prism to the Eye, does in like Circumstances suffer a greater Refraction than the Light which comes from the red half, and by consequence is more refrangible.

Fig. 11. *Illustration.* In the Eleventh Figure,  $MN$  represents the Window, and  $DE$  the Paper terminated with parallel Sides  $DJ$  and  $HE$ , and by the transverse Line  $FG$  distinguished into two halves, the one  $DG$  of an intensely blew Colour, the other  $FE$  of an intensely red. And  $BACcab$  represents the Prism whose refracting Planes  $ABba$  and  $ACca$  meet in the edge of the refracting Angle  $Aa$ . This edge  $Aa$  being upward, is parallel both to the Horizon and to the parallel edges of the Paper  $DJ$  and  $HE$ . And  $de$  represents the Image of the Paper seen by Refraction upwards in such manner that the blew half  $DG$  is carried higher to  $dg$  than the red half  $FE$  is to  $fe$ , and therefore suffers

suffers a greater Refraction. If the edge of the refracting Angle be turned downward, the Image of the Paper will be refracted downward suppose to  $\delta e$ , and the blew half will be refracted lower to  $\delta \gamma$  than the red half is to  $\phi e$ .

*Exper. 2.* About the aforesaid Paper, whose two halves were painted over with red and blew, and which was stiff like thin Pastboard, I lapped several times a slender thred of very black Silk, in such manner that the several parts of the thred might appear upon the Colours like so many black Lines drawn over them, or like long and slender dark Shadows cast upon them. I might have drawn black Lines with a Pen, but the threds were smaller and better defined. This Paper thus coloured and lined I set against a Wall perpendicularly to the Horizon, so that one of the Colours might stand to the right hand and the other to the left. Close before the Paper at the confine of the Colours below I placed a Candle to illuminate the Paper strongly: For the Experiment was tried in the Night. The flame of the Candle reached up to the lower edge of the Paper, or a very little higher. Then at the distance of Six Feet and one or two Inches from the Paper upon the Floor I erected a glass Lens four Inches and a quarter broad, which might collect the Rays coming from the several Points of the Paper, and make them converge towards so many other Points at the same distance of six Feet and one or two Inches on the other side of the Lens, and so form the Image of the coloured Paper upon a white Paper placed there; after the same manner that a Lens at a hole in a Window casts the Images of Objects abroad upon a Sheet of white Paper in a dark Room. The aforesaid white Paper, erected perpendicular to the Horizon and to the Rays which fell upon it from the Lens, I moved sometimes towards the Lens, sometimes from it, to find the